

UNAMUR AMONG THE 11 BELGIAN “ERC CONSOLIDATOR GRANTS”!



Karine Van Doninck, Professor at the University of Namur within the Research unit in Environmental and Evolutionary Biology (URBE) has just obtained an “ERC Consolidator Grant”. It is a prestigious grant, of almost two million euros, discerned by the European Research Council. A beautiful

recognition for this researcher and her group, and a great pride for the Institution!

The budget, allocated for five years, will enable Karine Van Doninck to finance her original research project on the bdelloid rotifers.

But what are rotifers?

They are microscopic animals (the first rotifer genome being sequenced by the group of Karine Van Doninck!) measuring less than one millimetre and being very abundant in mosses and lichens. The hypothesis of Professor Van Doninck is that these bdelloid rotifers, containing only females, have evolved other mechanisms than sexual reproduction to diversify, often being called an “evolutionary scandal” by evolutionary biologists!



But this characteristic is not their only surprising aspect. The research group of Karine Van Doninck also demonstrated that these rotifers were able to survive extreme conditions, such as complete dryness and high doses of radiation, both mechanisms inducing DNA breaks.

“When the genome of these animals is completely fragmented, they still survive and their damaged cells are not eliminated, instead the DNA gets repaired!”

Bdelloid rotifers are a kind of living cancer that bypasses damaged cells and continue reproducing”, explains Karine Van Doninck. The Professor aims to make from the rotifer a biological model organism to unravel the molecular basis of their extreme tolerance and their asexual evolution. This fundamental research could, in the long term, have interesting applications related to DNA repair and extreme survival. Finally, this ERC research grant will enable Karine Van Doninck and her team to expand their genomic database on rotifers.

ERC are prestigious grants, funding also fundamental research projects in many distinct research fields. The criteria of granting are precise: some publications in high impact journals, an original research question, being “curiosity-driven” amongst others. In 2016, 314 ERC Consolidator Grants were given to European researchers (11 to Belgians), with a total budget spanning 605 million euros. This year, 2274 applications were introduced, giving a final success rate of 13,8%. Karine Van Doninck belongs to the 28% women having obtained such an ERC Consolidator Grant in 2016.



<http://www.unamur.be/en/research/narc/karine-van-doninck>